

50 CFR Part 17**Endangered and Threatened Wildlife and Plants; Final Rule To Determine *Cereus robinii* (Key Tree-Cactus) To Be an Endangered Species**

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The U.S. Fish and Wildlife Service determines *Cereus robinii* (Key tree-cactus) to be an endangered species under the authority contained in the

Endangered Species Act of 1973, as amended. *Cereus robinii* occurs in the Florida Keys and in Cuba, where its range and population numbers have been drastically reduced. The remaining five U.S. populations, three of which occur on privately owned land, are endangered by the continuing urbanization of the Keys and by horticultural exploitation. This rule will provide *Cereus robinii* with the protection of the Endangered Species Act of 1973, as amended. The Service will initiate recovery efforts for this species.

DATES: The effective date of this rule is August 20, 1984.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours (7:00 a.m.-4:30 p.m.) at the Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207.

FOR FURTHER INFORMATION CONTACT: Mr. David Wesley, Field Supervisor at the above address (904/791-2580 or FTS 946-2580).

SUPPLEMENTARY INFORMATION: Background

Cereus robinii, a member of the cactus family or Cactaceae, consists of two varieties, *Cereus robinii* var. *robinii* and *Cereus robinii* var. *deeringii*. Both varieties are covered by this final rule. *Cereus robinii* was originally described as *Pilocereus robinii* by the French botanist Lemaire in 1864, based on specimens from Cuba. Other names which have been applied to this species include *Cephalocereus keyensis*, based on material from Key West, Florida (Britton and Rose, 1909), and *Cephalocereus deeringii*, based on a plant from Lower Matecumbe Key, Florida (Small, 1917). Benson (1969) considered these taxa to be conspecific with *Pilocereus robinii* Lemaire, which he transferred to the genus *Cereus*. He considered *Cephalocereus deeringii* Small to represent a variety of *Cereus robinii*. *Cereus robinii* var. *robinii* has now been reduced to a few locations in the Florida Keys and Cuba, while *Cereus robinii* var. *deeringii* has not been seen for many years and is probably extinct.

Cereus robinii is the largest of the native Florida cacti. Its erect, branched stems reach heights of 8 meter (25 feet). The succulent stems are cylindrical, spiny, and light or bluish-green, and measure 7–10 centimeters (2.5–3 inches) in diameter. The attractive flowers, which open in the late afternoon or evening, are 5–6 centimeters (2–2.5 inches) long and vary from white to green or purplish. The fruit is a dark red berry which measures 3–5 centimeters (1–2 inches) in diameter. *Cereus robinii* is the only native Florida cactus that stands erect at maturity and is considered a tree. This unique cactus occurs in rocky hammocks of the Florida Keys and Cuba. Early botanists described *Cereus robinii* as locally abundant. However, the plant communities in which *Cereus robinii* occurs have largely disappeared from the Keys and Cuba due to development and urbanization, and today *Cereus robinii* is near extinction. Of the five remaining populations in the keys, three occur on privately owned land and are very vulnerable due to the continuing urbanization of the Florida Keys.

Previous Federal protective actions began with section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94–51, was presented to Congress on January 9, 1975. On July 1, 1975, the Service published a notice in the Federal

Register (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4 of the Act, and of its intention thereby to review the status of the plant taxa named within. On June 16, 1976, the Service published a proposed rule in the Federal Register (41 FR 24523) to determine approximately 1,700 vascular plant species to be Endangered species pursuant to section 4 of the Act. This list of plants was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94–51 and the July 1, 1975, Federal Register notice. *Cereus robinii* was included in all three of these documents. General comments on the 1976 proposal were summarized in an April 26, 1978, Federal Register publication (43 FR 17909). The Endangered Species Act Amendments of 1978 required that all proposals over 2 years old be withdrawn. A 1-year grace period was given to proposals already over 2 years old. On December 10, 1979, the Service published a notice withdrawing the June 16, 1976, proposal along with four other proposals that had expired (44 FR 79796). The Service repropose *Cereus robinii* to be an endangered species on July 29, 1983 (48 FR 34483).

Summary of Comments and Recommendations

In the July 22, 1983, proposed rule (48 FR 34483) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices published in the Miami Herald on August 21, 1983, the Key West Citizen on August 28, 1983, and the Marathon Keynoter on September 1, 1983, invited general public comment. Ten comment letters were received and are discussed below.

The Florida Department of Agriculture and Consumer Services pointed out the endangered state of the tree-cactus and the need to protect it. The U.S. Army Corps of Engineers acknowledged that additional protection will be extended to the species and section 7 consultation procedures will be implemented in order to protect this valuable resource. The Florida Game and Fresh Water Fish Commission supported the proposal. In addition, the Florida Department of Natural Resources (Division of Parks and Recreation) expressed concern about poaching, and strongly recommended that the locations of the

extant populations not be published. As pointed out in the proposal, critical habitat is not designated for this reason. The International Union for the Conservation of Nature and Natural Resources (Conservation Monitoring Centre) and a private individual commented on the vulnerability of this species in Cuba. Several individuals suggested that the Service work with landowners that have Key tree-cactus as well as other endangered species, in order to reduce or eliminate impacts. In the past, the Service has attempted to work with developers, either through other Federal agencies or privately, to protect listed species; this policy will continue. Another private group pointed out that most of the remaining populations are located on only one key. One commentator inquired as to why critical habitat is not being designated which is explained in the critical habitat section of this rule.

No negative or adverse comments were received and no public hearing was requested or held.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Cereus robinii* should be classified as an endangered species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 et seq.) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 424; under revision to accommodate 1982 Amendments—see proposal at 48 FR 36062, August 8, 1983) were followed. A species may be determined to be endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Cereus robinii* (Lemaire) Benson (Key tree-cactus) are as follow:

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

Historically, *Cereus robinii* was known from at least 11 sites in the Florida Keys and also from two sites in Cuba. Today, only five sites remain in the Florida Keys, a reduction of almost 60 percent. Twelve areas of suitable habitat within the historical range of *Cereus robinii* in Florida were searched in June 1979, but *Cereus robinii* was relocated in only four of these areas (Austin, 1980). One of these sites, on Layton's Hammock, was visited again in August 1979, and most of the hammock and its vegetation had been bulldozed. Part of the hammock

containing the cacti was turned into a borrow pit several feet deep (Austin, 1980). The plants on this site were presumed extirpated, but were rediscovered in 1982.

A fifth site was discovered on private property in 1982. One of the historical sites for *Cereus robinii* was Key West, Florida. Small (1917) described this cactus as being abundant on Key West at one time, but being on the verge of extermination due to the destruction of the hardwood hammocks for firewood and for building sites. It was apparently extirpated by land clearing for a military base during World War II, and today, no specimens can be located there. Only two of the five sites where this species still occurs today are protected, one site located on land administered by the U.S. Fish and Wildlife Service (National Key Deer Refuge), and the other on land administered by the State of Florida, Department of Natural Resources (Long Key State Park). The plants on privately owned land are especially vulnerable to destruction through the continuing development of the Keys.

The past destruction of hardwood hammock habitat has reduced *Cereus robinii* to a very vulnerable level, and its future is now uncertain. The Florida Keys still are undergoing rapid residential and recreational development. This has resulted not only in the loss of populations of the cacti discussed in this rule, but also of the entire hardwood hammock habitats where they once grew.

In Cuba, *Cereus robinii* has suffered a similar plight. Housing and recreational development have destroyed a large percentage of the species' habitat. *Cereus robinii* is now considered endangered throughout its range by the International Union for the Conservation of Nature and Natural Resources (Lucas and Synge, 1978).

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Cereus robinii is an attractive species with high horticultural potential. The horticultural value of these cacti as landscape ornamentals, and the consequent exploitation, has been mentioned by many authors (Lucas and Synge, 1978; Little, 1975; Austin, 1980). Like many other species of cacti, *Cereus robinii* is vulnerable to over-collection due to the activities of some collectors, hobbyists, and societies. *Cereus robinii* could potentially be extirpated from its remaining sites by such activities. Since three of the populations occur on privately owned land, control of taking of these attractive plants is a special problem. Even on public lands, the

enforcement of taking prohibitions has been found to be difficult. Observation of one population of *Cereus robinii* showed evidence of vandalism in the form of cut-off branches and carved initials on the branches (Austin, 1980).

C. Disease or Predation

Not applicable to this species.

D. The Inadequacy of Existing Regulatory Mechanisms

Cereus robinii is listed as endangered under Florida law, offering it some protection from taking, intrastate transport, and selling. However, this protection does not protect its habitat and, by itself, will probably not be adequate to prevent the species' further decline. The collection of plants is also prohibited on State parks and on National Wildlife Refuges, but these prohibitions are difficult to enforce. All native cacti are on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which regulates export of this plant, but does not regulate interstate trade or habitat destruction. The Endangered Species Act would offer additional protection for the species, through section 7, interagency cooperation, and through section 9, which prohibits taking with intent to reduce to possession on Federal lands.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Restriction to specialized habitats and geographically limited range tend to intensify adverse effects upon the populations of any rare plant. This is certainly true for *Cereus robinii*, and is increased by the large amount of destruction that has already taken place. The small remaining populations of *Cereus robinii* are also threatened by natural factors, such as hurricanes. Small (1917) describes the destruction and damage of a population due to windthrow after a hurricane passed over the Keys. The growth habit of *Cereus robinii* makes it particularly vulnerable to this natural phenomenon. The reduction of the natural vegetation of coastal Florida and the Keys has reduced the natural buffering capacity to storm effects, increasing the vulnerability of the remaining cacti.

The Service has carefully assessed the best scientific information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Cereus robinii* as endangered. The precarious status of the few remaining colonies of this species place it in imminent danger of extinction

throughout its range. The reason for not designating critical habitat for *Cereus robinii* is discussed under the following section. A decision to take no action would exclude *Cereus robinii* from needed protection available under the Endangered Species Act. Therefore, no action or listing as threatened would be contrary to the Act's intent.

Critical Habitat

Section 4(a)(3) of the Endangered Species Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Cereus robinii* at this time. As discussed under factor B in the "Summary of Factors Affecting the Species," *Cereus robinii* is threatened by taking, an activity not regulated by the Endangered Species Act with respect to plants, except on Federal lands when removal and reduction to possession is involved. Publication of critical habitat descriptions would make this species even more vulnerable.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States, and requires that recovery actions be carried out for all listed species. The protection required by Federal agencies and taking prohibitions are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species which is proposed or listed as endangered or threatened. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species. If a Federal action may affect a listed species, the Federal agency must enter into consultation with the Service. Except for the management of the

service's Key Deer National Wildlife Refuge, no Federal involvement with *Cereus robinii* is currently known.

The Act and its implementing regulations found at 50 CFR 17.61, 17.62 and 17.63 set forth a series of general trade prohibitions and exceptions that apply to all endangered plant species. With respect to *Cereus robinii*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.61, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the U.S. to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.62 also provide for the issuance of permits to carry out otherwise prohibition activities involving endangered species under certain circumstances. *Cereus robinii* is already on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora, which requires a permit for export. International and interstate commercial trade in this species is minimal or nonexistent. It is anticipated that few trade permits would ever be sought or issued since these cacti are not common in the wild or in cultivation.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to possession of endangered plant species from areas under Federal jurisdiction. The new prohibition now applies to *Cereus robinii*, which occurs on land under Federal jurisdiction (U.S. Fish and

Wildlife Service, Key Deer National Wildlife Refuge) in Monroe County, Florida. Permits for exceptions to this prohibition are available through section 10(a) of the Act, until revised regulations are promulgated to incorporate the 1982 Amendments. Proposed regulations implementing this new prohibition were published on July 8, 1983 (48 FR 31417) and it is anticipated that these will be made final following public comment. Requests for copies of the regulations on plants, and inquires regarding them, may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, D.C. 20240, (703/235-1903).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

Literature Cited

- Austin, D.F., C.E. Nauman, and B.E. Tatje. 1980. Endangered and threatened plant species survey in southern Florida and the National Key Deer and Great White Heron National Wildlife Refuges, Monroe County, Florida. Report to U.S. Fish and Wildlife Service, Atlanta, Georgia.
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- Britton, N.L., and J.N. Rose. 1920. The Genus *Cereus* and its allies in North America. Contr. Nat. Herb. XII:416.

- Little, E.L., Jr. 1975. Our rare and endangered trees. *American Forests*. 81(7):18.
- Lucas, G., and H. Synge. 1976. The IUCN Plant Red Data Book. International Union for the Conservation of Nature and Natural Resources, Morges, Switzerland.
- Small, J.K. 1917. The tree cacti of the Florida Keys. *J. New York Bot. Garden* 18:199-203.
- Ward, D.B. 1979. Rare and endangered biota of Florida: Vol. 5—Plants. University Presses of Florida, Gainesville, FL.

Author

The primary author of this final rule is Mr. Donald T. Palmer, Endangered Species Field Station, U.S. Fish and Wildlife Service, 2747 Art Museum Drive, Jacksonville, Florida 32207.

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 reads as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.12(h) by adding the following in alphabetical order under Cactaceae to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Cactaceae—Cactus family:						
<i>Cereus robinii</i>	Key tree-cactus	U.S.A. (FL), Cuba	E		NA	NA

Dated: July 3, 1984.

Susan Recce,

Acting Assistant Secretary for Fish and Wildlife and Parks.

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